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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,986	12/22/2005	Dan Peters	2815-0343PUS1	1136

2292 7590 10/02/2008

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EXAMINER	
BAEK, BONG-SOOK	

ART UNIT	PAPER NUMBER
4161	

NOTIFICATION DATE	DELIVERY MODE
10/02/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/561,986	PETERS ET AL.	
	Examiner	Art Unit	
	BONG-SOOK BAEK	4161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13,14 and 16* is/are pending in the application.

4a) Of the above claim(s) *3,8,9,13 and 14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 4-7, 10-11, and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/22/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Status of claim

Claims 12 and 15 have been cancelled and claims 1-11, 13-14 and 16 are currently pending.

Election/Restrictions

Applicants' election of group I drawn to a compound or a composition of a aza-ring derivatives defined by formula I and election of the following species: (2,3-dichloro-phenoxy)-piperidine, in the reply filed on 9/12/2008 are acknowledged.

The above election was made with traverse. The traversal is on the ground that the claimed inventions are closely related with each other and thus could most efficiently be examined together. This is not found to be persuasive because of the following reasons: Regardless of close relationship among the groups, the compound which is the common technical feature for the claimed inventions is shown in the prior art, therefore groups I and II are not related to a single general inventive concept under PCT Rule 13.1 due to their lack of the same or corresponding special technical features under PCT Rule 13.2. The requirement is still deemed proper and is therefore made final.

Applicants stated that claims 1-10 and 16 reads on the elected species. However, claims 3, and 8-9 are not readable on the elected species since R^a is hydrogen and R^b is a phenyl group for the elected species.

Claims 3, 8-9, and 13-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group or species, there being no allowable generic or linking claim. Claims 1-2, 4-7, 10-11, and 16 are under examination in the instant office action.

Priority

The instant application is a 371 of PCT/EP04/51166 filed on 6/18/2004 and acknowledgment is made of applicant's claim for domestic priority to United States Provisional Patent Applications Serial No. 60/482,565 filed on 6/26/2003 under 35 U.S.C. 119(e) and for foreign priority under 35 U.S.C. 119(a)-(d). A certified copy of foreign application filed on 6/24/2003 has been submitted on 12/22/2005.

The earliest effective U.S. filing date afforded the instantly claimed invention has been determined to be 6/26/2003.

Information Disclosure Statement

A signed and initialed copy of the IDS filed on 12/22/2005 is enclosed in this action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 4-7, and 11 rejected under 35 U.S.C. 112, first paragraph, because the

specification, while being enabling for a few compounds of formula (I), does not reasonably provide enablement for plethora of possibilities encompassed by the formula (I). With respect to the making aspect of enablement requirement, the specification is enabling for making compounds wherein X is O. It is not seen where in the specification enablement is for compounds wherein X is S or NR and the sum of m and n is 5. With regards to use aspect of the specification, the disclosure is limited to generic statement that biological activity of compounds of the invention for inhibiting reuptake of the monoamines can be tested as described in WO 97/30997 (p9, lines 37-39) and disclosure of very broad range of dosage such as 0.1-1000 mg/day, 10-500 mg/day, and especially 30-100 mg/day dependent on the mode of administration (p10, lines 32-38). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination. Rather, it is a conclusion reached by weighing all the relevant factual considerations.

Enablement is considered in view of the Wands factors (MPEP 2164.01 (a)). While all the above factors were considered, some of the specific considerations are described below:

The breadth of the claims: The claim is drawn to compounds defined by formula (I), which are allegedly useful in the treatment of a variety of disorders. The formula (I) is drawn to substituents layered on top of substituents that vary independently and lead to compounds of a wide variety of structures. These compounds encompass molecules that widely vary in the physical and chemical properties such as size, molecular weight, acidity, basicity, and properties

that are known in the art to greatly influence pharmacokinetic and pharmacodynamic parameters, not to mention the ability to productively bind to claimed biological target molecules. The number of theoretically conceivable compounds for the formula is in billions rendering the scope of the claims large.

The level of the skill in the art: The level of skill in the pharmaceutical art is high. Due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for viability.

The amount of direction or guidance present: The guidance and direction provided in the application for making the claimed compounds is limited. The direction is limited to some preferable compounds. That is, the applicant, at the time of the instant application, was not in possession of compounds of formula (I) wherein X is –S- and -NR- and the sum of ma and n is 5. While the specification mentions that starting materials are available commercially, citation of the commercial sources or literature citation for making starting materials necessary, in lieu of enabling disclosure, is absent in the specification. In the absence of prior art teaching, absence of citations (commercial or literature) for the procuring needed starting materials for the preparation of substitutions other than the ones mentioned above, one skilled in the art attempting to make compounds of the present inventions would be faced with undue research burden.

The state and the predictability of the art: The pharmaceutical art is unpredictable and target compounds need to be individually assessed for viability. Extremely broad generalizations as found in the instant claims are in contradiction with the basis of quantitative structure-activity-relationship (QSAR). In spite of the narrow structural characteristics (see above) of the disclosed compounds, the biological activity seems to vary widely. Thus it is unpredictable what specific

embodiment of the billion possibilities of the instant claims would have the desired biological properties.

The quantity of experimentation needed: Based on the factors stated above, one of ordinary skill in the art would be presented with an unpredictable amount of research effort to identify a compound out of the plethora of possibilities encompassed by the formula I that would have useful biological properties.

Genentech Inc. v. Novo Nordisk A/S (CA FC)42 USPQ2d 1001, states that "a patent is not a hunting license. It is not a reward for search, but compensation for its successful conclusion" and "patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable".

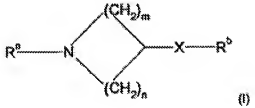
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

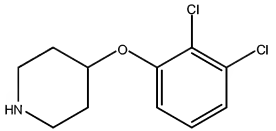
1) Claims 1-2, 4-7, 10-11, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent application publication 2002/0077337 A1 (publication date: 6/20/2002).

The instant invention is drawn to an aza-ring derivative represented by formula (I) and its pharmaceutical composition. The followings are the structures of formula (I) and elected species:



(I)

Elected species: 4-(2,3-dichloro-phenoxy)-piperidine



US 2002/0077337 A1 teaches piperidine derivatives having pharmaceutical activity and pharmaceutical compositions comprising such derivatives and a pharmaceutically acceptable adjuvant, diluent or carrier ([001] and [0232]). It further discloses 4-(2,3-dichloro-phenoxy)-piperidine as an intermediate compound (p57, [0417], 16th compound), which is the exact same compound as the elected species.

As such, the instant claims are anticipated by US 2002/0077337 A1.

2) Claims 1-2, 4-7, 10-11, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 7,265,227 B2 (Issue date: 9/4/2007; US effective filing date: 7/19/2002).

US patent 7,265,227 B2 teaches piperidine derivatives useful as modulators of chemokine receptor activity and pharmaceutical compositions comprising such derivatives and a pharmaceutically acceptable adjuvant, diluent or carrier (abstract and column 16, lines 43-48). It further teaches 4-(2,3-dichloro-phenoxy)-piperidine as an intermediate compound (column 20 line 54), which is the exact same compound as the elected species.

As such, the instant claims are anticipated by US patent 7,265,227 B2.

Provisional Double Patenting Rejection

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2, 4-7, and 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 and 9 of copending US application No.11/579059. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds claimed in the instant application and the compounds have the identical core structure when the sum of n and m is four in the formula (I) of instant invention and have the same utility as monoamine neurotransmitter re-uptake inhibitor. The difference between the instant compound and the compounds of the copending applications is that the piperidine ring in the compounds of the copending applications is substituted with al least one alky group such as methyl group.

It is well established that the substitution of methyl for hydrogen on a known compound is not a patentable modification absent unexpected or unobvious results. *In re Wood*, 199 USPQ 137 (CCPA 1978) and *In re Lohr*, 137 USPQ 548, 549 (CCPA 1963). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity.

This is a provisional obviousness-type double patenting rejection.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BONG-SOOK BAEK whose telephone number is 571-270-5863. The examiner can normally be reached 8:00-5:00 Monday-Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Nolan can be reached on 571-272-0847. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BONG-SOOK BAEK
Examiner, Art Unit 4161

Bbs

/Patrick J. Nolan/

Supervisory Patent Examiner, Art Unit 4161